

United States Patent [19]

Banerjee et al.

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[54] TOBACCO SMOKING ARTICLE

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131/273; 131/360

[58] Field of Search 131/194, 270, 271, 273,
131/360, 359

[56] References Cited

U.S. PATENT DOCUMENTS

2,104,266 1/1938 McCormick .
3,258,015 6/1966 Ellis et al. .
3,683,936 8/1972 O'Neil, Jr. .
4,079,742 3/1978 Rainer et al. .
4,149,548 4/1979 Bradshaw .
4,284,089 8/1981 Ray .
4,393,884 7/1983 Jacobs .
4,708,151 11/1987 Shelar .

4,714,082 12/1987 Banerjee et al. .
4,756,318 7/1988 Clearman et al. .
4,774,971 10/1988 Vieten .
4,793,365 12/1988 Sensabaugh, Jr. et al. .

FOREIGN PATENT DOCUMENTS

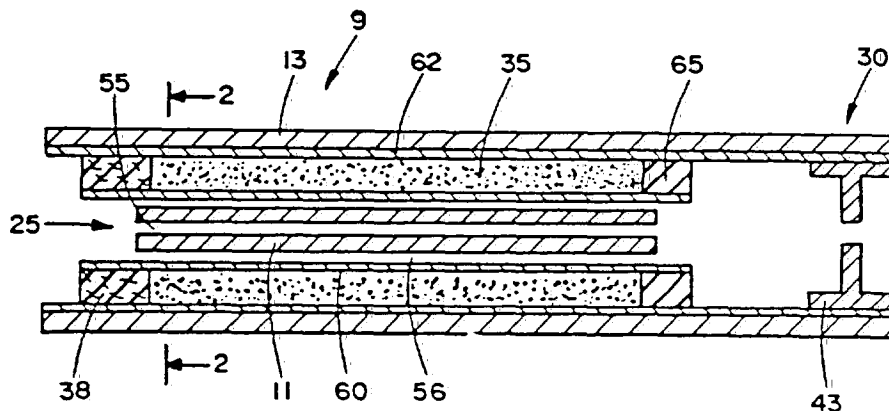
276250 6/1967 Australia .
86/02528 5/1986 World Int. Prop. O. .

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[57] ABSTRACT

A cigarette provides tobacco flavor by heating tobacco, but not burning tobacco or any other material. A heat source which includes granular magnesium, granular iron, and finely divided cellulose generates heat upon contact thereof with an aqueous solution of potassium chloride. The heat source is in a heat exchange relationship with the tobacco. Heat generated by the heat source heats tobacco in a controlled manner. Flavors volatilize from the tobacco and are drawn from the cigarette and into the mouth of the smoker. Typical heat sources heat the tobacco to a temperature within about 70° C. to about 180° C. for 4 to 8 minutes.

47 Claims, 2 Drawing Sheets



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